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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/571,998	03/09/2006	Hiroo Muramoto	20241/0207047-US0	1278

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EXAMINER
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BERNSHTEYN, MICHAEL

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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08/17/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/571,998	<b>Applicant(s)</b> MURAMOTO ET AL.	
	<b>Examiner</b> MICHAEL M. BERNSHTEYN	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,9,10,25,26,33,34,56,77,96 and 97 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,9,10,25,26,33,34,56,77,96 and 97 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1,9,10,25,26,33,34,56,77,96 and 97 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/23/2009,06/23/2009</u> .                                   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office Action follows a response filed on June 23, 2009. Claims 1, 25, 26, and 77 have been amended; no claims have been cancelled or added.
2. In view of amendment(s) and remarks the rejection of claim 56 under 35 U.S.C. 2<sup>nd</sup> paragraph, and the rejection of claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 under 35 U.S.C. 102(b) as being anticipated by Konno et al. (JP 11-240998) have been withdrawn.
3. Applicant's arguments with respect to claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 have been considered but are moot in view of the new ground(s) of rejection.
4. Claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 are pending.

### ***Claim Rejections - 35 USC § 102***

5. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.

### ***Claim Rejections - 35 USC § 103***

6. The text of this section of Title 35 U.S.C. not included in this action can be found in a prior Office Action.
7. Claims 1, 9, 10, 25, 26, 33, 34, 77, 96, and 97 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Konno et al. (JP 11-240998) for rationale recited in paragraph 7 of the Office Action dated March 26, 2009.

The disclosure of Konno's reference resided in § 7 of the Office Action dated March 26, 2009 is incorporated herein by reference.

With regard to new limitation that the copolymer forms a microphase-separated structure claimed in claims 1, 25, 26, and 77, Konno is silent about it. However, in view of substantially identical composition between Konno and instant claims, it is the examiner position that Konno's composition inherently possesses this property. Since the USPTO does not have equipment to do the analytical test, the burden is now shifted to the applicant to prove otherwise. *In re Fitzgerald* 619 F 2d 67, 70, 205 USPQ 594, 596 (CCPA 1980).

Even assuming that the claims are not anticipated by the reference, it would have been obvious to one of ordinary skill in the art to make the polymer composition having the claimed property because it appears that the reference generically embrace the claimed subject matter and the person of ordinary skill in the art would have expected all embodiments of the reference to work. Applicants have not demonstrated that the differences, if any, between the claimed subject matter and the subject matter of the prior art examples give rise to unexpected products.

8. Claim 56 is rejected under 35 U.S.C. 103(a) as being unpatentable over Konno et al. (JP 11-240998) in view of Nakanishi et al. (U. S. Patent 6,096,234).

With regard to the limitations of claim 56, Konno discloses that the (B)-(A)-(C) block copolymer which consists of a taper block segment (it is written as C.) in which the content of the polar monomers 1-3 decreases gradually is also preferred at segment A (A), and a segment (B) and within the limits below 10 mol %. It is desirable even if it is

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the (B)-(A)-(B) block copolymer etc. which consist of segment B (B), and segment A (A) and segment B (B) in this order. Above-mentioned (A)-(B) block copolymer, (B)-(A)-(C) block copolymer, considering it as the block copolymer which extended or branched also has a preferred segment which is expressed with the general formulas (3) - (5) via the residue of a coupling agent, respectively in (B)-(A)-(B) block copolymer (pages 8-0, [0047], [0048]).

With regard to the limitations of claim 56, Konno discloses that the monomers can be arbitrary chosen according to the purpose of use (page 6, [0036]).

With regard to the limitations of claim 56, Konno does not disclose that a polymer solid electrolyte battery comprising an electrode which comprises an electrode-activating compound.

Nakanishi discloses a thin solid cell comprising the composite solid electrolyte, a positive electrode, and a negative electrode, wherein the positive electrode comprises a solid electrolyte, which in turn comprises at least the block-graft copolymer and the alkali metal salt, and the active material of the positive electrode, and wherein the negative electrode comprises a solid electrolyte, which in turn comprises at least the block-graft copolymer and the alkali metal salt, and **the active material** of the negative electrode (col. 7, lines 38-48).

Examples of the active material of a positive or negative electrode used in the thin solid cell include individual metals such as metallic lithium, metallic silver, and metallic zinc; alloys such as Li--Al; carbon materials such as graphite, carbon black, graphite fluoride, and polyacetylene; metal oxides such as MnO<sub>2</sub>, CoO<sub>2</sub>, V<sub>2</sub>O<sub>5</sub>, V<sub>6</sub>O<sub>13</sub>,

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TiO<sub>2</sub>, WO<sub>2</sub>, Cr<sub>2</sub>O<sub>5</sub>, Cr<sub>3</sub>O<sub>8</sub>, CuO, Cu<sub>2</sub>V<sub>2</sub>O<sub>7</sub>, Bi<sub>2</sub>O<sub>3</sub>, Bi<sub>2</sub>PB<sub>2</sub>O<sub>5</sub>, and Mo<sub>8</sub>O<sub>2</sub>; chalcogenides such as TiS<sub>2</sub>, TiS<sub>3</sub>, MoS<sub>2</sub>, CuCo<sub>2</sub>S<sub>4</sub>, VSe<sub>2</sub>, NbSe<sub>2</sub>CrS<sub>2</sub>, and NbSe<sub>3</sub>; oxyacid salts of silver such as Ag<sub>2</sub>CrO<sub>4</sub>, Ag<sub>2</sub> MoO<sub>4</sub>, AgIO<sub>3</sub>, and Ag<sub>4</sub> P<sub>2</sub>O<sub>7</sub>; and  $\pi$ -conjugated polymers such as polyaniline, polypyrrole, polythiophene, and poly-p-phenylene (col. 19, lines 30-44).

It is noted that all of the above mentioned examples of the active material of a positive or negative electrode are substantially identical to the examples of an electrode-activating compound of the specification (page 83, lines 6-17).

Both references are analogous art because they are from the same field of endeavor concerning new polymer solid electrolyte compositions.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the above mentioned active materials as taught by Nakanishi in Konno's polymer solid electrolyte composition because adding an ionic conducting compound similar to an electrolyte component to an electrode effectively activates a lithium-related oxidation-reduction reaction in the electrode (US'234, col. 19, lines 10-13), and thus to arrive at the subject matter of instant claim 56.

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 1, 9, 10, 25, 26, 33, 34, 56, 77, 96, and 97 have been considered but are moot in view of the new ground(s) of rejection.

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10. It appears that the focal Applicants argument resides in the contention that Konno does not disclose a composition for a polymer solid electrolyte comprising a copolymer having repeating units represented by Formula (I) and repeating units represented by Formula (II), plus an electrolyte salt, wherein the copolymer forms a microphase-separated structure (page 13, 2<sup>nd</sup> paragraph), and that Konno does not disclose that the block chain C11 includes arbitrary components (page 13, 4<sup>th</sup> paragraph).

11. It is noted that the response for this argument was made above in paragraphs 7 and 8 of current Office Action).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL M. BERNSHTEYN whose telephone number is (571)272-2411. The examiner can normally be reached on M-Th 8-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael M. Bernshteyn/  
Examiner, Art Unit 1796

/M. M. B./  
Examiner, Art Unit 1796

/David Wu/  
Supervisory Patent Examiner, Art Unit 1796



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